

PROCEEDINGS
OF THE
CALIFORNIA ACADEMY OF SCIENCES
FOURTH SERIES

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MAY 4, 1916

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Report of the President of the Academy for
the Year 1915

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C. E. GRUNSKY
President of the Academy

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Report of the Director of the Museum for
the Year 1915

BY
BARTON WARREN EVERMANN
Director of the Museum

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REPORT OF THE PRESIDENT OF THE ACADEMY
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BY
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President of the Academy

For the year which has just closed the Academy can again record progress. The construction of the Museum building in Golden Gate Park had been sufficiently advanced in August, 1915, to make possible a transfer of the Academy's collections, of its library, and of its offices, from the temporary quarters of the last few years at No. 343 Sansome Street.

This annual meeting is notable, therefore, because it is the first annual meeting, and in fact, the first meeting, at the Academy's new quarters in its Museum building in Golden Gate Park. It may be well in passing again to call attention to the fact that the privilege to build here was granted by the people of San Francisco at a public election on November 15, 1910.

The Academy has planned a building which is specially adapted to Museum purposes but which will also afford adequate space and facilities for research work and for the storage and preservation of research material.

Of the proposed building a first section only has been erected, covering about one-third of the ground space which it is proposed ultimately to occupy. The cost of the building

May 4, 1916

to February 1, 1916, has been in round numbers \$175,600 of which all except about \$125 has been paid.

The building has not yet been opened to the public, but it is expected that the installation of the habitat groups of mammals and of birds will have been sufficiently advanced to justify a formal opening sometime in May of this year.

The acceptance by the Academy of the offer of Mr. Wm. M. Fitzhugh to exhibit in the Museum building the Fitzhugh-Lowe collection of Indian baskets, Indian stone implements and related articles, has resulted in a well filled hall whose contents are most attractive and instructive. I desire to record at this time not only the Academy's appreciation of having this valuable collection added to its museum, but also the fact that the entire installation including the exhibition cases was made at the expense and under the personal supervision of Mr. Fitzhugh. The Indian baskets in this collection are said to constitute the largest and most complete exhibit of the kind in existence.

Owing to lack of suitable cases and space the Hemphill shell collection remains largely boxed, but it is hoped that something may be done soon toward making it available for study and a portion of it for exhibiton.

The Academy found opportunity to be represented, in a small way, at the Panama-Pacific International Exposition, where, in the Food Products Building, space was secured for a joint exhibit by the Academy and the California Fish and Game Commission. While the allotted space, the best that was available, was altogether too restricted for results that might otherwise have been secured, the exhibit, prepared with material from the Academy's stock by and under the direction and supervision of Mr. John Rowley of the Academy, was nevertheless an effective, attractive display which forecasts what we are now beginning to realize in the habitat groups that are being installed in this building.

The Academy has received a number of valuable donations from the Panama-Pacific International Exposition Company and from various countries which were represented at the Exposition. Full reference to these will be made in the report of the Director of the Museum, and I wish only to say that the Academy is sincerely appreciative

of the good-will which these donations manifest and that it will make the best possible use thereof. Australia, Argentina, New Zealand, China, Japan, Honduras, Guatemala, and the Netherlands are among the contributors. These donations consist largely of minerals and woods, and many other objects, including some desirable pieces of furniture. Similar donations were received from various states, including California, Montana, Missouri, Idaho, Oregon, and Washington. The government of Porto Rico gave a good relief map of Porto Rico and nine excellent large photographs of Porto Rican natural scenery.

A fine specimen of the Florida Manatee was donated by the late Mr. Warren Frazee ("Alligator Joe"), at the suggestion of Mrs. Nellie Waterhouse Dorne, one of our members. The skin and skeleton have been saved.

A large number of valuable specimens and desirable cases and tables were received from the U. S. Bureau of Fisheries.

A large series of minerals, woods, etc., has been contributed by the various Sacramento and San Joaquin Valley County Associations.

The many other donations made during the year to the Academy's museum and library are too numerous for enumeration in this report. They will be referred to in more detail in the report of the Director of the Museum.

The publications of the Academy cover Parts I to VI of Vol. V of the Fourth Series of Proceedings, in all 193 pages.

The activities in the various departments during the year are fully set forth in the reports of the Director of the Museum and of the several curators, and do not require repetition. It need only be stated that the large and continuing demand upon the Academy's financial resources for the installation of the exhibits, has made it necessary to keep the allotments for work in these departments at the lowest possible amounts. The Academy is not in command of resources, in other words, that would enable it to do all that an institution of its character should do for California, for the Pacific Coast, and for the entire Pacific Ocean region.

The curator of botany has been active during the year in enlarging and caring for the herbarium to which many important additions have been made.

The department of paleontology has been very active. Many additions to the collections have been made and several scientific papers based on the department's collections have been published or prepared.

The curator and assistant curator of herpetology have the immense collections of that department installed on shelving and have done much toward increasing the collections.

A few accessions have been received by the departments of mammalogy and ornithology and a beginning has been made with the department of invertebrate zoology.

The curators and their assistants have been alert and efficient in caring for the collections in their charge and their earnestness and enthusiasm deserve and should receive the encouragement of the community and of the entire Pacific Coast.

We may hope that the high class work that is being done, of which some samples of educational value will soon be on display, will attract the attention of the public, and will make clear that ours is an institution for service worthy of generous support by those whose means will permit.

Our building will quickly be filled to capacity. We already know that we will be short of space to display all that has been collected and prepared for attractive educational exhibits.

The Academy's thanks are due, and I take pleasure in expressing them, to those who are devoting of their lives to the scientific and educational work under the Academy's guidance and for which the Academy can provide only inadequate compensation.

The interest displayed in their work, combined with the high order of skill, ability and talent possessed by those who are installing the habitat groups in our Mammal and Bird halls, may be accepted as an assurance that these exhibits will have artistic merit ranking with the best that has yet been produced.

The courtesy of the Mechanics Institute has made it possible to hold the Academy's stated monthly meetings since August at the Mechanics Institute. Up to the present time the Council has not deemed it wise to arrange for these meetings in the Museum building, whose auditorium is not yet ready

for them, and which lacks the convenience of location which can be claimed for the Mechanics Institute.

On behalf of the officers of the Academy I wish to express their appreciation of the help received from members and friends in advancing the Academy's work, and as President I wish to thank all who have in any way contributed to extend the Academy's usefulness.

The present total membership in the Academy is 472, made up of:

Honorary Members	27
Life Members	86
Resident Members	359

During the year 1915 there was an accession of 63 new members, and the Academy lost by death 6, by resignation 25, and by being dropped for arrearages in dues, 9. The net gain in membership during the year has been 23.

The losses by death were:

Greene, Prof. Edward L.....	Life Member	November 10, 1915
Günther, Dr. Albert.....	Honorary	1914
Hilgard, Prof. Eugene W....	Honorary	January 8, 1916
Holladay, Mr. S. W.....	Life	February 16, 1915
Putnam, Prof. Frederic W...	Honorary	August 14, 1915
Wilson, Mr. J. C.....	Resident	1915

LECTURES

During the year 1915, 14 free lectures have been delivered at the stated meetings of the Academy, as follows:

JANUARY 18.	"The Significance of Glaciation in Geologic Time." Dr. Marsden Manson.
JANUARY 29.	"The Work of the United States Biological Survey." W. L. McAtee, U. S. Biological Survey.
FEBRUARY 17.	"Explorations of a Sacred Cave in Arizona." Dr. Walter Hough, Curator of Ethnology, United States National Museum.
MARCH 17.	"Liquid Air." Prof. E. C. Franklin, Professor of Chemistry, Stanford University.
MARCH 26.	"International Peace." Chancellor David Starr Jordan.

- APRIL 21. "Physiographically Unfinished Entrance to San Francisco Bay."
Dr. Ruliff S. Holway, Professor of Geography, University of California.
- MAY 19. "The Status and Life History of the Tree Mouse, *Phenacomys longicaudus* True."
Dr. Walter P. Taylor, University of California.
- JUNE 16. "The Food of the Roadrunner in California."
Dr. Harold C. Bryant, University of California.
- JULY 21. "The Lessons of the Southeast Wind."
Dr. Marsden Manson, San Francisco.
- AUGUST 18. "Administration of Fish and Game Laws."
Ernest Schaeffle, Secretary California Fish and Game Commission.
- SEPTEMBER 15. "Snap-shots in Brazil."
Prof. E. C. Starks, Stanford University.
- OCTOBER 20. "Pearls and Pearl Culture."
Prof. Charles A. Kofoed, University of California.
- NOVEMBER 17. "Some Fishes and Fishing in California and Nevada."
Prof. John O. Snyder, Stanford University.
- DECEMBER 15. "Ancient Climates of the West Coast."
Dr. James Perrin Smith, Stanford University.

FINANCIAL

The financial transactions of the Academy are fully set forth in the Treasurer's report and in the financial records. From these it appears that our gross annual income is about \$67,500, of which about \$46,272 is the net return from the Academy's Market Street property and about \$1500 is the amount received from members as admission fees and dues. The Academy has recently borrowed the sum of \$32,175 in order to advance the completion of its building and the installation of exhibits. The total obligations on which interest is now being paid is in round numbers \$332,000.

The gross annual receipts from the Market Street property for twelve months are about \$64,272, and the interest on the \$300,000 for which this property is mortgaged to the New York Mutual Life Insurance Company is \$18,000, leaving the net annual return from this property \$46,272, as above stated.

The expenditures in the calendar year 1915 will give some idea of how the available funds, apart from the investment in the Museum building and in exhibits, have been used. The amount of interest paid was \$18,257.05, and interest received

was \$1,633.28. The salaries paid during the year amounted to \$15,705.35; the insurance paid was \$2,120.03, and the general operating expenses were \$3,339.94.

These figures show that about \$28,000 of the Academy's receipts were available in 1915 for construction and installation of exhibits and that a fair annual surplus may be expected which, after a year or two, will in part be available for reducing the Academy's financial obligations.

The fact that it has been necessary to thus anticipate for a period the usual surplus should cause no regret. We know that the time will come when the results achieved will fully justify the course which has been pursued.

VIII

REPORT OF THE DIRECTOR OF THE MUSEUM FOR THE YEAR 1915

BY

BARTON WARREN EVERMANN

Director of the Museum

At the time of the last annual report of the Director of the Museum (January 4, 1915), construction work on the new Museum building had been stopped. The hope was expressed that the difficulties with the contractors would soon be adjusted and that the work might be resumed at an early date. This hope was realized. A satisfactory adjustment was made and building operations were resumed early in March. The work proceeded with reasonable celerity and the research wing was ready for occupancy the last week in August. During the last days of August the offices and research collections were transferred from the temporary quarters at 343 Sansome Street to the new Museum building. The Sansome Street quarters were given up and the rent ceased August 31, 1915.

Construction work on the three exhibition halls continued with reasonable speed. The connecting corridor was completed early in September and the installation of the Fitzhugh-Lowe collection of Indian baskets, pottery and stone implements was begun at once and completed in December. This collection consists of a total of about 15,000 specimens, of which practically all except duplicates have been placed on exhibition. The space available for this exhibit has been completely utilized; indeed, the objects now on display are in many cases too crowded for the best effect. Considerable additional space will be needed if the entire collection is to be properly exhibited.

The Academy is indebted to the public spiritedness and generosity of Hon. Wm. M. Fitzhugh for the opportunity to put this splendid collection on exhibiton.

The California Mammal Hall and the Bird Hall were completed in December and the installation of the habitat groups was at once begun. Considerable progress has already been made.

ELK DISTRIBUTION

In the fall of 1914 the Academy, with the coöperation of Messrs. Miller and Lux and the Southern Pacific and Santa Fé railroads, undertook to distribute a portion of the Kern County herd of elk to suitable reservations in the State. A total of 54 animals were distributed, as set forth in detail in the Director's report for 1914. In the fall of 1915 this conservation work was again taken up. Messrs. Miller and Lux again built a large corral on their alfalfa land near Buttonwillow, in which they succeeded in trapping about 100 elk, mostly females and young, of which 92 were distributed by the Academy in November and December, as follows:

- Thomas Jacob, Visalia, for Mooney Park, near Visalia, 1 male and 3 females.
- W. C. Claybaugh, for Fresno City Park, 1 female.
- A. V. Lisenby, Fresno, for large reservation near Friant, 1 male and 2 females.
- P. H. Loinaz, Fresno, for private park near Fresno, 1 male and 1 female.
- John Zapp, Fresno, for private park near Fresno, 1 male.
- Walter L. Chrisman, San Jose, for Alum Rock Park, 2 males and 2 females.
- A. T. Hain, Cook, California, for Vancouver Pinnacles Reservation, 1 male and 3 females.
- J. F. Dunne, Gilroy, for a 15,000-acre reservation near San Felipe, 1 male and 4 females.
- P. C. Morrissey, Santa Cruz, for Laveaga Park, Santa Cruz, 2 males and 4 females.
- H. L. Middleton, Boulder Creek, for the California Redwood Park, 4 females.
- Park Commissioners, Sacramento, for Del Paso Park, 3 males and 9 females.
- Park Commissioners, Petaluma, for City Park, 2 males and 10 females.
- Henry D. Nichols, San Francisco, for large reservation at Eden Valley, near Willits, Mendocino County, 2 males and 10 females.
- Park Commissioners, San Diego, for Balboa Park, 3 males and 19 females.

Some of these shipments are regarded as experimental. It is not certain that the elk will do well in all the places to which they were sent. This is particularly true of the northern shipments to Sacramento, Petaluma, and Mendocino County, although reports received from Sacramento and Petaluma state that their elk are doing well. A report recently received regarding the Mendocino shipment is not so favorable. Nine of the 12 have died. The winter there has been unusually severe, with unprecedentedly heavy snow. It is believed that the climatic conditions in that part of the State are too severe for this species, whose natural habitat is further south in a milder climate.

The reports regarding the shipments of 1914 are uniformly favorable. They indicate that the elk are doing well in all places. The animals have grown markedly, several fawns have been born, and all are in good condition.

It is hoped and believed that these transplantings will aid materially in preventing the extinction of this interesting species of big game.

DEPARTMENT ACTIVITIES

Owing to the demands of building, moving and installation, the activities of the respective departments were necessarily greatly restricted. Getting the collections ready for transfer, then the actual moving, followed by the installation in the new quarters, engaged the curators and their assistants during the larger part of the year. Nevertheless each department was able to accomplish considerable additional work of importance.

1. *Department of Herpetology.*—The assistant curator spent several weeks engaged in field work in southern California which resulted in considerable additions to the collections. During the year the total number of specimens in this department was increased from 31,470 to 32,280. Among the additions is a specimen of the very rare species of gigantic land tortoise of Aldabra.

In spite of the work and confusion incident to moving, the regular routine work of caring for the collections has progressed, and much has been done in the way of classification, labeling, arranging, and card cataloguing.

A paper dealing with the amphibians and reptiles of Utah was completed by the department and published in June. Other scientific papers based on the collections are in course of preparation. A vivarium has been constructed on the roof of the rear exhibition wing in which various species of reptiles and amphibians are kept for observational purposes.

2. *Department of Entomology*.—No successor as assistant curator has as yet been appointed to the late Mr. Charles Fuchs, and the department has therefore been without the services of a preparator. The collections have been inspected from time to time, and they have been enriched by a number of considerable donations, as listed in the appendix to this report.

Certain series of specimens have been assigned to specialists for study and report.

The proper building up and care of the collections in this department require the employment of additional help and it is hoped this can be done.

3. *Department of Ornithology*.—The very large and valuable collection of birds is now installed in suitable cases in the new building. No field work was done by the department in the year, and, as a consequence, only a few minor additions to the collections have been made. Mr. Loomis has made constant use of the Tubinares of the collection in connection with the preparation of a monograph on that group of birds upon which he is engaged.

4. *Department of Mammalogy*.—The acting curator and his assistants during the year gave practically all their time to the preparation of materials for the habitat groups which are now being installed. No field collecting was done except incidental to other work. Some specimens, however, were obtained, especially in connection with the moving of the elk.

5. *Department of Invertebrate Zoology*.—This department was reestablished only a year ago, and only a small allotment was made for its use. This fund has been expended in part in starting the making of a synoptical series of the marine invertebrates of the California coast.

6. *Department of Invertebrate Paleontology*.—Mr. F. M. Anderson, the curator of this department, was absent on leave during the year, engaged on certain special work for a large

oil company in Colombia, South America. Under the immediate direction of the assistant curator, the department has been active in building up and caring for the collections, and in carrying on research work. The months of April to June were chiefly devoted to packing the collections preparatory to moving. During August and September the collections were moved, unpacked, and installed in the cases in the new building. Although these duties required a great deal of time, opportunity was found to do some field work. Two trips were made to the Petaluma Quadrangle, which resulted in clearing up a number of the problems concerning the geologic history of that region.

During the year the Academy published a paper prepared by the assistant curator dealing with the Fauna of the Type Tejon, and its relation to the Cowlitz phase of the Tejon group.

The Academy also published a paper by Dr. E. T. Dumble, based partly on Academy material, on the Tertiary deposits of Northeastern Mexico. Three other papers based in part on the collection of this department have been completed and accepted for publication, and at least two others are in preparation.

Many and valuable additions to the collections of this department during the year, most of them being donations by various exhibitors at the Panama-Pacific International Exposition. These are set forth in detail in the appendix to this report. Mr. F. M. Anderson and Mr. Bruce Martin made extensive collections at Gatun, on the Panama Canal, and on the north coast of the United States of Colombia. These collections include both recent and fossil shells and constitute a valuable addition to the department's research materials.

Professor Yabe of the Imperial University of Tokyo has already given the Academy an excellent collection of Pleistocene and a few Cretaceous fossils from Japan, and an exchange of other specimens has been arranged.

Arrangements have been made whereby the California State Mining Bureau will instal in the Museum a comprehensive exhibit illustrative of the mineral resources of the state. The Standard Oil Company has offered to instal an exhibit of models, charts, etc., that will, it is believed, prove of great edu-

cational value in elucidating a number of the more important and popular phases of the oil industry.

7. *Department of Botany.*—The usual activity has been displayed by the curator in caring for the herbarium and securing accessions to it. During the year there have been added to the herbarium 2220 mounted sheets representing 1241 species new to the collection. The herbarium now contains a total of 20,586 mounted sheets representing 7997 species, all properly arranged in the herbarium cases. Besides these there is a large number of specimens not yet mounted. There are also 475 fungi types in envelopes arranged alphabetically in boxes. These were saved from the fire of 1906. Besides these there are 1136 specimens of phanerogams containing 711 types and 96 cotypes saved from the fire. Besides these, certain other specimens were saved from the fire because of the fortunate circumstance that they were loaned at the time. They are as follows: A large bundle of Gilias returned from Germany, and containing many types; a bundle of *Ptelea* returned from Washington; some specimens of *Eschscholtzia* which had been loaned to the late Dr. Edward L. Greene; and most of the Academy's specimens of *Lupinus* and some of *Delphinium* which had been loaned to the Gray Herbarium, all of which have been returned. All these specimens saved from the fire fill one herbarium case in which they are now installed.

Owing to the inexcusable failure of the author of the reports on the Galapagos plant collections to correlate properly his published identifications with the specimens, the curator has found it necessary to go over the entire collection and identify each specimen anew. This has entailed a vast amount of work.

Within the year the curator made a number of brief collecting trips, as follows: One to the region of the San Antonio and Nacimiento rivers near Jolon in Monterey County, and to Aromas in San Benito County; one to Mt. Diablo; one to Mt. St. Helena, Calistoga, and the Petrified Forest; one of a week's duration in the foothills of Mariposa County; one to Bodega Point, the type locality of many species; and finally, a brief trip to Los Angeles and San Diego. All these trips were brief and were

made at very little expense, the total amounting only to about \$70.00.

Mention should be made of the valuable voluntary service which Mrs. Marian L. Campbell, Mrs. G. Earle Kelly and Mrs. Elizabeth Parsons Hawver have rendered the Academy. Mrs. Campbell has mounted 6434 sheets of herbarium specimens. Mrs. Kelly has mounted 218 sheets of specimens from the Grand Canyon. And Mrs. Hawver has put the collection of ferns in order. The fern collection contains a great many exotic genera and species, some donated by the Philippine Bureau of Science, some donated by Doctors Fred and Charlotte Baker, and a fine collection of 100 Hawaiian ferns donated by Mrs. Zelia Nuttall.

The curator has continued her excellent work with the Botanical Club and with the Park gardeners. The Botanical Club holds weekly meetings at the Academy or in the field. The Gardeners' class also meets once a week at the Park Lodge.

8. *Department of Exhibits.*—This department has been busy during the year preparing the large habitat groups of mammals and birds which are now being installed. One of the assistants was detailed for a considerable portion of the year to duties in connection with the building operations and, later, for a few weeks in connection with the elk distribution.

The installation of the large habitat groups has begun. The Antelope, Mule Deer (winter scene), and Steller's Sea Lion groups are nearing completion. The backgrounds are practically done, the animals are in place, and the accessories will soon be finished. Work has begun on the California Sea Lion and the Farallon Bird groups, and it is hoped they may be completed within the next two months. Then the Leopard Seal, the California Valley Elk, the Desert Mountain Sheep, the Mountain Lion, the Black Bear, and the Los Baños Bird groups are all ready as to materials, and the Desert Bird group is ready except as to a part of the accessories.

It is intended to place in the Mammal Hall six additional groups, viz: the Buro Deer, the White-tail Deer (fall scene), Humboldt Elk, Fur Seal, Coyote and Wild Cat, but the materials for these have not yet been collected. The animals for an Elephant Seal group are ready, but there is no suitable place in which to install the group. The same is true of the Win-

ter, Spring, Summer and Fall groups of the Black-tailed Deer. The animals and accessories are all ready, but there is no suitable place in which to place them. The animals are also on hand for two Gigantic Land Tortoise groups, but the accessories have not been prepared and there is no suitable place for the groups unless two of the spaces in the Bird Hall be utilized for that purpose.

The present situation regarding the habitat groups is therefore as follows:

- a. Groups for which practically all animals and accessories are prepared and which will be completed within the next few months: Steller's Sea Lion, California Sea Lion, Leopard Seal, Antelope, Mule Deer (winter scene), California Valley Elk, Desert Mountain Sheep, Mountain Lion, Black Bear, Farallon Bird group, and Los Baños Bird group.
- b. Groups for which all the animals and accessories have been prepared but for which there is no suitable place in which to install them: Four seasonal groups of the Black-tailed Deer.
- c. Groups for which the animals but not the accessories have been prepared, but for which there is no suitable place for installation: Elephant Seal group.
- d. Groups for which most of the animals and accessories have been prepared and which with a little more collecting can be installed: Desert Bird group.
- e. Groups for which the animals are on hand and some of them mounted, for which the accessories are needed and for which there is no suitable place for installation unless space in the Bird Hall be used: Two Gigantic Land Tortoise groups.
- f. Groups for which suitable places for installation have been provided but for which the animals have not been collected nor the accessories prepared: Buro Deer, White-tailed Deer, Humboldt Elk, Alaska Fur Seal, Coyote, and Wild Cat.

It is the intention to endeavor to collect this spring and next fall the animals required for the Alaska Fur Seal, the

Humboldt Elk, the Buro Deer, and the needed accessories for the Desert Bird groups.

It is also intended to begin the preparation of groups of small mammals and birds to go in the small spaces back of the large panels at the ends of the large groups. There are spaces for 34 of these small groups, 22 in the Mammal Hall and 12 in the Bird Hall. The animals are on hand for only one of these groups (the California Striped Skunk), but it is hoped that materials for several others may be obtained within the year. It is also desired to begin the preparation of small portable groups or exhibits suitable for loan to the schools. These will include not only groups of small mammals and birds, but of other animals and of plants, minerals, etc. It is hoped to make this one of the prominent activities of the Museum.

Exhibit at the Panama-Pacific International Exposition.—When the contracts were let for the Museum it was hoped that the building would be completed by the beginning of 1915 and that a number of habitat groups and other exhibits could be installed early in the year. In view of these probabilities it was decided not to make any exhibit at the Exposition, but to endeavor to have the Museum far enough along to attract a fair proportion of the Exposition visitors. Owing to unexpected delay in building operations this hope was not realized.

The California State Fish and Game Commission desired to make an exhibit at the Exposition, but did not possess suitable materials. Coöperation between the Commission and the Academy was suggested, with the result that an agreement was entered into whereby the Academy would furnish and install the materials and the Commission would meet the expense. This arrangement was carried out and a joint exhibit was installed in the Food Products Palace. The exhibit consisted of the following: A Desert Mountain Sheep group, a Summer Deer group, a Mountain Lion den, a Black Bear den, a hunter's camp, an aquarium, and various minor exhibits. This was completed early in the summer and proved to be one of the most interesting and attractive exhibits of the entire Exposition. There was seldom an hour during the continuance of the Exposition that a large number of visitors could not be seen admiring the various units of this exhibit, and many expressions of approval and appreciation were heard.

ACCESSIONS TO THE MUSEUM

The accessions to the Museum during the year have been many and varied, as shown by the detailed list in the appendix to this report. Most of the accessions have been donations received from exhibitors at the Panama-Pacific International Exposition, among whom may be here mentioned the following: The governments of Argentina, Australia, Bolivia, China, Cuba, Guatemala, Denmark, Honduras, Japan, New Zealand, Norway, the Netherlands, Porto Rico, and Sweden. Important donations have also been received from the following: The U. S. Bureau of Fisheries, the U. S. Geological Survey, the states of Idaho, Montana, Washington, Oregon, Missouri, Louisiana, and New York; also from the Standard Oil Company, the Sacramento Valley Counties Association, the San Joaquin Valley Counties Association, and the Anaconda Copper Company. Considerable donations of cases, matting and other articles have been received from the Exposition Board.

LIBRARY

About 3000 linear feet of metal book stacks have been installed in the library, which occupies rooms on both floors at the south end of the research wing—a room with 846 square feet of floor space on the second floor and one with 1344 square feet of floor space on the first floor, or a total of 2190 square feet.

The books are now being arranged on the shelves according to the Library of Congress Classification, and a good start has been made with the accession list.

RECOMMENDATIONS

Addition to the Museum Building.—It is already evident that the present museum building is wholly inadequate for housing the collections and exhibits of the Academy already on hand. For example, there is no place for the following habitat groups already prepared: Elephant Seal group and the four seasonal groups of the Black-tailed Deer. There is no suitable space for the two groups of Gigantic Land Tortoises and the Iguana, for which we already have the materials, nor for

the 86-foot Sulphur-bottom Whale skeleton. Nor is there any room for suitably displaying any of the many large and very interesting collections of minerals, ores, woods, and other objects received from the Exposition; we have not even storage room for many of the exhibition cases, tables, etc., received from the Exposition.

In order to relieve this congestion, to avoid the necessity of placing exhibits in halls in which they do not logically belong, and to enable the museum to place on exhibition habitat groups and other exhibits already prepared or available for preparation, an additional hall is immediately necessary. Perhaps the most practical and economical thing to do would be to glass over and close in the court between the two rear wings. According to estimates gotten a year ago, this could be done for about \$9000.00. It would doubtless cost more now owing to the increased cost of materials. To close in the court and provide a second floor or balcony which would greatly increase the exhibition space, provide the necessary cases, etc., would now probably require a total of about \$20,000.

An alternative would be the construction of a hall across the rear corresponding to the Mammal Hall. This addition would have the same dimensions as the Mammal Hall, but should be very different in internal structure. Its cost would probably not exceed \$40,000.

Taxidermists' Shop.—Until recently the taxidermists have used a building of Mr. Rowley's in Berkeley as a taxidermists' shop, for which the Academy paid \$300 a year rent. Now that we have moved into the new museum building, it is necessary to have a work shop nearer at hand. A building is needed in which to store the animals, etc., which have not yet been prepared and to carry on all the preparatory work of the Department of Exhibits. It is estimated that such a building as is required, together with proper equipment, could be built for \$1500. It would be located in the rear of the present building at a place acceptable to the Park Superintendent.

Exhibits.—It is highly desirable that the habitat groups in the two exhibition halls be put in place at an early date. The large habitat groups for which space has been provided should be installed as rapidly as possible. The same should be done with the small habitat groups of mammals and birds.

The preparation of small portable educational groups should be commenced and proceeded with as rapidly as the materials can be collected. Exhibits in other departments, as botany, entomology, herpetology, paleontology, geology, etc., should soon receive attention. Exhibits should not be limited to the departments of birds, mammals, and anthropology.

Research Collections.—Although the funds of the Academy are quite inadequate to meet its needs, to enable it to do much of that which it would like to do along the various lines of its legitimate activities it is important that none of its essential functions be even temporarily entirely abandoned. While most attention must for the present be given to the exhibition phase of museum equipment, the necessity for the enlargement of the research collections must not be forgotten. These collections should be enlarged by the addition of desirable specimens secured by purchase, exchange, donation and field collecting, and selected to meet the research needs of investigators. The several departments should be productive in scientific investigation and the study material must be provided. Such allotments of funds for field work and the acquiring of specimens should therefore be made as the income of the Academy will justify.

APPENDIX TO THE DIRECTOR'S REPORT

LIST OF ACCESSIONS TO THE MUSEUM, 1915

- American Museum of Natural History, New York: Two meadow mice from Alaska; one chipmunk from Three Forks, Colo.; one white-footed mouse from Enterprise, and two meadow mice from Florida; two white-footed mice from Penobscot Co., Maine; two white-footed mice, two chipmunks, and one gopher from Fort Snelling, Minn.; one meadow mouse from Tobique River, and two shrews from Tronser's Lake, New Brunswick; two white-footed mice from Fairview, and one chipmunk from Newton, New Jersey; one pine squirrel from Alder Creek, one from Cornwall, three pine squirrels, one gray squirrel, two musk rats, two white-footed mice, one meadow mouse, one shrew, and one mole from Hastings, one jumping mouse from Lawyersville, one bat and one gray squirrel from New York City, two white-footed mice, two meadow mice, one shrew, and one pine squirrel from Nyack, one woodchuck from Tarrytown Heights, and one cottontail rabbit from West Orange, New York; one meadow mouse from Raleigh, North Carolina; two meadow mice from Rockport, and one from San Antonio, Texas; one meadow mouse from Haitland, and one pine squirrel from Linwood, Vermont; and four musk ox and one Peary caribou, collected by Lieutenant R. E. Peary in North Grant Land. Exchange.
- Anaconda Copper Co., through Mr. E. P. Mathewson, Anaconda, Montana: Fifteen specimens of various ores, concentrates, etc.; two specimens of copper; three glass exhibition cases; two circular stands for exhibition; 18 framed photographs and diagrams illustrating smelting, with movable screens for exhibiting diagrams; all from exhibit at the Panama-Pacific International Exposition. Gift.
- Anderson, F. M., California Academy of Sciences: Collections of shells, both recent and fossil, made at Gatun, Isthmus of Panama, and on the north coast of the United States of Colombia, with the assistance of Mr. Bruce Martin. Exploration.
- Argentine Committee in Buenos Aires, for the Panama-Pacific International Exposition, through the Honorable Enrique M. Nelson, Vice-Commissioner General in Charge: Sixty-nine specimens of Argentine woods, and 86 packages of seeds of various species. Gift.
- Arnold Arboretum, Jamaica Plain, Mass.: A collection of 1243 herbarium specimens, including 143 genera, 21 of which are new to the Academy's herbarium, and 730 species. Exchange.
- Australia, Government of (New South Wales), through the Honorable Niel Nielson, Commissioner for New South Wales, Panama-Pacific International Exposition: Fourteen cases of ores; one block of bituminous shale; four mounted birds; 24 plaster casts of fishes; one Black-tailed Scrub Wallaby (*Macropus ualabatus*), mounted; one mounted Wombat (*Phascolomys mitchelli*); and seven large photographs of natural scenery. Gift.

- Australia, Government of (Queensland), through the Australian Commission, Panama-Pacific International Exposition: Ten specimens of native woods. Gift.
- Baker, Dr. Fred and Dr. Charlotte, San Diego, Cal.: A collection of more than 1000 specimens of plants from Japan and the East Indies, consisting of 277 genera, and 498 species, and including one family, 65 genera, and 412 species that are new to the herbarium of the Academy. Gift.
- Barbour, Thomas, Cambridge, Mass.: One lizard from Cuba. Exchange.
- Blumer, J. C.: Four specimens of plants from Arizona. Gift.
- Bolton, A. L., California Academy of Sciences: One badger skull from Arizona. Exploration.
- Bolton, A. L., California Academy of Sciences: A collection of plants from the Mohave Desert and Arizona, including about 40 species. Gift.
- Bowman, Miss Agnes, San Francisco: Fifteen specimens of plants from the Grand Canyon of the Colorado. Gift.
- Breeze, Wm. F., San Francisco: A series of insects. Gift.
- British Museum, London: One hundred and fifty-five specimens of plants, 32 of which were collected by Dr. Frank in Ohio in 1835, and 123 by Leo Lesquereux. Exchange.
- Buttle, Mrs. Alvina, San Diego, Cal.: Sixteen specimens of plants from San Diego Co., Cal. Gift.
- California Fish and Game Commission, San Francisco: A set of quail's eggs. Gift.
- California, State of, through Mr. W. D. Egilbert, Commissioner General, Panama-Pacific International Exposition: Sixteen plate glass show cases with stands, and two large safes. An indefinite loan.
- Carlson, John I., California Academy of Sciences: One snake and eight lizards from Cochise Co., and one toad from Yuma Co., Arizona; two snakes, one lizard and one salamander from San Francisco, and five lizards, one tree toad, and two salamanders from Santa Catalina Island, Cal.; 12 lizards from El Paso Co., and seven lizards from Fort Bliss, Texas. Exploration.
- Carlson, John I., California Academy of Sciences: A collection of 184 specimens of plants from Arizona; 54 from Santa Catalina Island, Cal.; and 74 from Texas; many of the species being new to the herbarium of the Academy. Exploration.
- China, Government of, through the Honorable Chen Chi, Commissioner General, Panama-Pacific International Exposition: Eighty-eight specimens of woods; 165 specimens of minerals; 17 boxes of cocoons; three boxes of skeins of silk; specimens of silk worms in alcohol; specimens of 192 varieties of seeds; one pair of buffalo horns; 24 framed photographs of natural scenery; 135 glass jars, bottles, and large containers for exhibition material; and a miscellaneous lot of exhibition boxes, cases, etc. Gift.
- Chipman, Dr. E. D., San Francisco: One snake from Fresno Co., Cal. Gift.

- Cockerell, T. D. A., State University of Colorado, Boulder, Colo.: One bundle of specimens of plants from New Mexico. Gift.
- Combined Amusements Co., Panama-Pacific International Exposition, through Mrs. Nellie Waterhouse Dorne, San Francisco: Two aningas and one manatee from Florida. Gift.
- Coombs, Mrs. A. L., San Francisco: Seventy-four specimens of plants from Oregon. Gift.
- Cuba, Government of, through General E. Loynaz del Castillo, Commissioner General for Cuba, Panama-Pacific International Exposition: Section of a Cuban Fan Palm (*Calpotherinx wrightii*); eight specimens of ores; one specimen of serpentine rock; and a specimen of asphalt. Gift.
- Dickerson, Dr. Roy E., California Academy of Sciences: Two snakes from San Francisco. Gift.
- Dorne, Mrs. Nellie Waterhouse, San Francisco: Specimen of a fossil tree from Arizona. Gift.
- Eastwood, Miss Alice, California Academy of Sciences: Two hundred and four specimens of plants from Bodega Point, Sonoma Co.; 16 specimens from Granada, and 225 from vicinity of King City, Monterey Co.; 20 specimens from Lagunitas, Marin Co.; 208 specimens from Mariposa and Merced counties; 123 specimens from Mount Diablo; 148 specimens from Mount St. Helena; 33 specimens from Point Reyes and Inverness; and 20 from San Leandro, Alameda Co.; 191 specimens of California grasses; 621 specimens of exotics cultivated in California; and 1110 mounted specimens from the Yukon-Alaska expedition. Exploration.
- Edmands, W. H., Lake, Cal.: One woodpecker, one screech owl, and two least bitterns. Gift.
- Evermann, Dr. Barton W., California Academy of Sciences: One snake and two lizards from Kern Co., Cal. Gift.
- Evermann, Dr. Barton W., California Academy of Sciences: Seventy-three specimens of plants from Kern Co., Cal. Gift.
- Farrell, Miss Margaret, San Francisco: Six specimens of Oregon woods from the "White Pine Home" at the Panama-Pacific International Exposition. Gift.
- Fauntleroy, Miss Sophie, Santa Barbara, Cal.: Fifteen specimens of plants from Mariposa Co., Cal. Gift.
- Gerrard, Edward, & Sons, London: Seventeen snakes from India; four turtles from Borneo; one tortoise from Madagascar; one lizard from New Zealand; and one tortoise from the Seychelles Islands, Africa. Exchange.
- Gester, Clark, San Francisco: A series of tertiary shells from Peru. Gift.
- Gray Herbarium, Cambridge, Mass.: A collection of 501 specimens of plants from Washington, Utah, and the eastern United States, and from Mexico, Philippine Islands, and Siberia. Exchange.

- Guatemala, Government of, through the Honorable José Flamenco, Commissioner General, Panama-Pacific International Exposition: Nineteen specimens of minerals; 19 specimens of native woods; specimens of fibre, cotton, wax, rubber, etc. Gift.
- Halton, Miss Harriet, Carmel, Cal.: Nine specimens of plants from Monterey, Cal. Gift.
- Henry, Prof. J. K., Vancouver, B. C.: A collection of plants from Vancouver, B. C., comprising about 120 specimens. Gift.
- Herring, J. P., California Academy of Sciences: Five jack rabbits, 13 white-footed mice, two coyotes, two southern California elk, and two elk skulls, from Buttonwillow, Kern Co.; three wood rats, four tree squirrels, one weasel, one shrew, two ground squirrels, 10 chipmunks, one mole, seven meadow mice, and one bat, from Mendocino Co., Cal. Exploration.
- Honduras, Government of, through the Honorable Timoseo Miraldo, Commissioner General, Panama-Pacific International Exposition: Thirty-four exhibition jars and bottles; 34 specimens of native woods; specimens of seeds, jasper, iron ore, etc. Gift.
- Hubbs, Carl T., Stanford University, Cal.: A collection of marine invertebrates from Pacific Grove, Cal. Exploration.
- Hurter, Julius, St. Louis, Mo.: Two turtles from Bayou La Battre, and one turtle from Mount Vernon, Alabama; one toad from Yavapai Co., Arizona; one lizard from Santa Catalina Island, Cal.; two lizards and one turtle from British Honduras; and two lizards and one turtle from Guatemala. Exchange.
- Idaho, State of, through the Idaho State Commission, Panama-Pacific International Exposition: Twenty-five specimens of ores; one specimen of Yew. Gift.
- Imperial University of Japan, Tokyo: A collection of Pleistocene, and a few Cretaceous, fossils, from Japan. Exchange.
- Japan, Government of, through the Honorable H. Yamawaki, His Imperial Japanese Majesty's Commissioner General to the Panama-Pacific International Exposition: Thirty-one sections of native bamboo; specimens of zinc ores; a quantity of zinc dust; four large water-color paintings representing the four seasons; and two glass show cases. Gift.
- Kaeding, Mrs. Mary C., San Francisco: One fish duck, one hoopie, and two kingfishers from Korea. Gift.
- Kusche, J. Aug., Eldridge, Cal.: A collection of forty-one specimens of plants from Alaska. Gift.
- Lehman, Mrs., White Pass, Alaska: Six botanical specimens from Alaska. Gift.
- Mailliard, Joseph, San Francisco: Two topotypes of the Kern Redwing (*Agelaius phoeniceus aciculatus*) from Kern Co., Cal. Gift.
- Martin, Bruce, Cartagena, Colombia, S. A.: A collection of insects from the United States of Colombia, S. A. Gift.

- McAllister, M. Hall, San Francisco: Three young Golden Beavers (*Castor subauratus*), taken in the Suisun marshes, Cal. Gift.
- McAtee, W. L., Washington, D. C.: Seventeen specimens of plants from Washington, D. C. Gift.
- McClellan, J. Ellis, Fort Worth, Texas: One lizard from Fort Worth, Texas; and one lizard from Juarez, Mexico. Gift.
- McDonald, Miss Julia, San Francisco: A collection of plants from Fresno Co., Cal., comprising about 90 specimens. Gift.
- McGuire, Ignatius W., California Academy of Sciences: One snake from Marin Co., Cal. Gift.
- Meiere, Mrs. Ernest, San Francisco: Three specimens of plants from northern California. Gift.
- Milvain, Miss Margaret, Dawson, Yukon: Thirteen botanical specimens from Alaska. Gift.
- Missouri, State of, through the Commissioner General, Missouri State Commission, Panama-Pacific International Exposition: Twenty-six specimens of minerals; one cotton plant. Gift.
- Murphy, R. C., Brooklyn Museum, Brooklyn, N. Y.: Two lizards from Mexicali, Lower California. Gift.
- New York, State of, through Mr. Daniel L. Ryan, Secretary, New York State Commission, Panama-Pacific International Exposition: Thirteen exhibits of garnet powders and sands, and three specimens of minerals. Gift.
- New Zealand, Government of, through the Honorable E. Clifton, Commissioner General, Panama-Pacific International Exposition: One lizard (*Sphenodon punctatus*), from New Zealand. Gift.
- Norway, Government of, through the Honorable Consul F. Herman Gade, Commissioner, Panama-Pacific International Exposition: Two cases containing exhibits of paper making, and two tables. Gift.
- Oregon, State of, through the Honorable Oscar E. Freytag, Oregon State Commission, Panama-Pacific International Exposition: Twelve specimens of various Oregon woods. Gift.
- Pack, Herbert, Salt Lake City, Utah: Eleven snakes from Morgan Co., eight frogs from Cache Co., and eight frogs and two salamanders from Salt Lake Co., Utah. Gift.
- Phelps, Mrs. Kate Eastwood, Denver, Colo.: A collection of ninety-five specimens of plants from Colorado. Gift.
- Porto Rico, Government of, through the Honorable Martin Tranèso, Jr., Acting Governor of Porto Rico, and Mr. E. T. Hull, Manager Porto Rico Coffee Exhibit, Panama-Pacific International Exposition: A relief map of Porto Rico; nine framed photographs of Porto Rican natural scenery; and one wooden coffee mill and pestle. An indefinite loan.
- Rixford, G. P., San Francisco: Twenty specimens of plants from various localities in California. Gift.

- Rothschild, Hon. Walter, Thring, England: One fossil turtle carapace from Madagascar; one tortoise cast, Rotumah Islands; two tortoise casts, Seychelles Islands, Africa; and three casts of carapaces, and two tortoise casts, localities unknown. Exchange.
- Rowley, John, California Academy of Sciences: Five Steller's sea lions from Año Nuevo Islands; and striped skunk for group, from Monterey, Cal. Exploration.
- Rowley, John, California Academy of Sciences: Three roadrunners, one flicker, two red-tailed hawks, and one ferruginous rough-legged hawk, from Kern Co., two mountain quails and one fox sparrow from Mendocino Co., Cal. Exploration.
- Ruddock, Geo. T., San Francisco: Twelve specimens of plants from Arizona. Gift.
- Sacramento Valley Counties Association, through the Sacramento Valley Commission, Panama-Pacific International Exposition: Forty-four specimens of minerals. Gift.
- San Joaquin Valley Counties Association, through Mr. Walter C. Maloy, Assistant Manager San Joaquin Valley Exhibit, Panama-Pacific International Exposition: Three hundred and six specimens of minerals, gold, silver, lead, zinc, copper, and iron ores, flint, asbestos, etc.; specimens of box woods; 57 specimens of various California woods; five specimens of petrified wood. Gift.
- Seitz, Mrs. A. R., Beaumont, Cal.: Seven specimens of plants from Riverside Co., Cal. Gift.
- Simson, Leslie: Two moose, three caribou, three mountain goats, three mountain sheep, and four brown bears from Alaska. Purchase.
- Sisson, L. H.: One weasel from Alturas, Cal. Gift.
- Slevin, J. R., California Academy of Sciences: Six snakes, 20 lizards, 11 toads, 119 tree toads, 14 frogs, and two salamanders from Los Angeles Co.; 70 snakes, 175 lizards, six toads, one tree toad, five frogs, and two turtles from San Diego Co.; and one lizard from Lower California. Exploration.
- Smith, L. E., Sisson, Cal.: A collection of specimens of plants from northern California, comprising about 130 specimens. Gift.
- South Dakota, State of, through Mr. Charles McCaffree, Commissioner of Immigration: Six specimens of ores from the Homestake Mine, from exhibit at the Panama-Pacific International Exposition. Gift.
- Sperry Flour Co., San Francisco, through Mr. B. D. Ingalls, Manager Sperry Exhibit, Panama-Pacific International Exposition: Four millstones. Gift.
- Standard Oil Co., San Francisco: A relief map of California showing oil fields; two panoramas in oil tanks illustrating the drawing and refining of oil; diagram of section of an oil field showing oil bearing strata; diagram of section of an oil well; 35 jars of asphalt in block, with four glass models showing materials in block; 11 legends for use in exhibition; and eight diagrams, with stands; all from exhibit at Panama-Pacific International Exposition. Gift.

- Stark, Dr. E. T., San Francisco: A series of minute fossils from the Midway Oil Field, California. Gift.
- Sweden, Government of, through the Honorable Richard Bernstrom, Commissioner General, Panama-Pacific International Exposition: Three cases of specimens of various minerals; exhibits of sugar products; a quantity of wood acid; and one exhibition glass case and stand. Gift.
- U. S. Bureau of Fisheries, through Dr. Hugh M. Smith, Commissioner, Washington, D. C. A large *Tridacna gigantea* on stand; eight specimens of American lobster; two glass jars containing fishes; 39 glass vials of embryo fishes; eight swordfish "swords"; plaster cast of the head of a blackfish; one case exhibit of young oysters on net; nine "saws" of sawfishes; four jars containing specimens of lobsters; one fur-seal group and base; two live alligators; 14 live turtles; one live frog; one stuffed alligator; five jawbones of sharks; 10 jars of fish glue; 64 jars of fish oil; five specimens of fossil shells; 15 jars fish products; 20 jars of whale bone and salmon fertilizers; one eel pot; three lobster pots; one skate of halibut trawl; four buoys for halibut; haddock and cod trawls; wicker eel pot; one Pacific Coast trawl line; model of Cail Fishway and stand; bundle of isinglass; three tables; two unit cases; 33 pieces of balene; small angling case complete; and containers for oil and fertilizer; all from exhibit at the Panama-Pacific International Exposition. An indefinite loan.
- U. S. Geological Survey, through Dr. George Otis Smith, Director, Washington, D. C.: Twenty-three specimens of minerals; specimens of ores, coal, etc. Gift.
- U. S. National Herbarium, Washington, D. C.: Four hundred and eighty-five specimens of plants from Mexico, the species all new to the herbarium of the Academy. Exchange.
- Van Denburgh, Dr. John, California Academy of Sciences: Six snakes from El Dorado Co., one lizard from Plumas Co., one lizard from San Mateo Co., four snakes, five lizards, two tree toads, 10 frogs, and 42 salamanders from Santa Clara Co., one snake and six lizards from Tehama Co., Cal.; and four lizards from Washoe Co., Nevada. Exploration.
- Van Dyke, Dr. E. C., California Academy of Sciences: A series of insects from Lake Tahoe, California. Exploration.
- Washington, State of, through Mr. Charles G. Heifner, Executive Commissioner, Panama-Pacific International Exposition: Eighty-five specimens of various minerals; and two specimens of woods. Gift.
- Webb, Miss Zelia, Campo, Cal.: Two snakes from San Diego Co., Cal. Purchase.
- Wilkens, Mrs. Johanna E., San Francisco: Seventeen tree toads from San Francisco. Gift.

LIST OF ACCESSIONS TO THE LIBRARY, 1915

- American Institute of Electrical Engineers, New York: Two bound volumes. Gift.
- Belding, Lyman, Stockton, Cal.: One hundred and forty-six books and pamphlets, relating chiefly to ornithology, and including many rare numbers of the Academy's early publications. Gift.
- Bennett, John E., San Francisco: One pamphlet.
- Carnegie Institution, through President Robert S. Woodward, Washington D. C.: A series of 275 volumes forming a nearly complete set of the publications of the Institution to date. Gift.
- Commonwealth Club, San Francisco: Twenty bound volumes. Gift.
- Davis, Hon. Horace, San Francisco: A complete set of the Academy's publications, all of the earlier volumes finely bound. Gift.
- Dickerson, Dr. Roy E., California Academy of Sciences: Two pamphlets. Gift.
- Dorne, Mrs. Nellie Waterhouse, San Francisco: Popular Science Monthly, 1915, and three pamphlets. Gift.
- Gilbert, Dr. G. K., Washington, D. C.: One copy Geology of the Uinta Mountains, by Powell. Gift.
- Guatemala, Government of, through the Honorable José Flamenco, Commissioner General, Panama-Pacific International Exposition: One bound volume. Gift.
- Jennings, E. C., New York: One bound volume Fishing Gazette. Gift.
- Kaeding, Mrs. Mary C., San Francisco: Two numbers of the Academy's Memoirs. Gift.
- Loomis, Leverett Mills, San Francisco: One volume and nine pamphlets. Gift.
- Mailliard, Joseph, San Francisco: A set of framed photographs of beavers, taken from life in Stanislaus Co., Cal. Gift.
- Mearns, Dr. Edgar A., Washington, D. C.: A series of 48 pamphlets. Gift.
- Meek, Mrs. Seth Eugene, Chicago, Ill.: Copy of memorial volume to Dr. Seth Eugene Meek. Gift.
- Missouri Bureau of Geology and Mines, through the Missouri Commissioner, Panama-Pacific International Exposition: Twelve volumes, bound in cloth. Gift.
- Nichols, J. T., American Museum of Natural History, New York: A complete set of Copeia to date. Gift.
- Parker, Sir Gilbert, London: Five bound volumes and many pamphlets, relating to the present war in Europe. Gift.
- Parish, Dr. S. B., San Bernardino, Cal.: Nine pamphlets. Gift.
- Van Denburgh, Dr. John, California Academy of Sciences: Twenty-seven bound volumes, and three pamphlets. Gift.
- Van Dyke, Dr. E. C., California Academy of Sciences: One pamphlet. Gift.

Washington, State of, through the Washington State Commission, Panama-Pacific International Exposition: Fifteen volumes, four U. S. Geological Survey topographic maps, and eight geologic atlases. Gift.

Wilkins, Mrs. Johanna E., San Francisco: Two volumes and four pamphlets. Gift.

Wood, Williard, San Francisco: Eight of the early volumes of the Nautilus, and 18 numbers of the Conchologists' Exchange. Gift.

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The Academy cannot supply any of its publications issued before the year 1907, its entire reserve stock having been destroyed in the conflagration of April, 1906.